PDI 380 PID Controller





Product Description

Digital microprocessor based controller with single display, 4 red digits and 4 bottons operation, designed for different application such as Plastics Industries, Thermal Equipment, Packaging Machinery, Textile/die processing machinery, generic cooling/heating process. water chillers, eat recovery system, Chemical, etc. Up to 4 configurable set points, a configurable multi input and up to 2 configurable outputs for relay or solid state relay (SSR) driving. Different alarm output

configuration available. The device incorporates different control modes: ON/OFF, single or double (direct and reverse) action PID or NEUTRAL ZONE control. Particular PID control algorithm with TWO DEGREES OF FREEDOM for optimizing instrument's features independently of the event of process disturbances and Set Point variations.

Multi-level parameters programming protected by password. Easy parameters configuration and storage by KEY.

- 75x33 mm case, for flush-in panel mounting
- °C/°F unit selectable for temperature probe
- 3 shift programmable index LEDs
- 2 outputs status LEDs
- Automatic Control, Bumpless Manual Control or **Control OFF mode**
- FAST AUTOTUNING, SELFTUNING
- **FUZZY OVERSHOOT CONTROL** parameter function for PID mode
- Soft Start, Loop-Break Alarm function enable
- Reaching of the set point at controlled speed, rump ٠ and dwell function
- Protection compressor function for Neutral Zone control

Ord	ering	Key	

Model -



Approvals

Type Selection

Powe	r Supply	Input	Signal	Main	output OUT1	Secor	nd output OUT2
H:	100240VAC	 V:	0/1-5 0/2-10 VDC	R:	8A-AC1,	X:	No
L:	24VAC/DC	1:	0/4-20 mA		3A-AC3 / 250VAC	R:	8A-AC1,
F:	12VAC/DC	E:	TC (J, K, S, I R),		Relay		3A-AC3 / 250VAC
			PTC, NTC, mV	0:	8mA/8VDC for SSR		Relay
		C:	TC (J, K, S, I R),			0:	8mA/8VDC for SSR
			Pt100, mV				

Input Data

One multi-configurable Input	
Thermocouples	TC J, K, S - According to
	IEC 584-2, accuracy class 1 or 2
Infrared Thermocouples	IRS J and K
Thermoresistance	RTD Pt100 - According to
	IEC 751, accuracy class A or B
Thermistors	PTC KTY81-121 (990 Ω at 25°C)
	NTC 103AT-2 (10kΩ at 25°C)
Normalized analogue signals	0-50 mV, 0-60mV, 12-60 mV
	0/4-20 mA
	0/1V, 0/1-5 V, 0/2-10 V
Normalized signals	for 0/420 mA input: 51Ω
input impedance	for mV and V input: $1M\Omega$

Output Data

Up to two Outputs	
Relay	SPDT
-	(8A-AC1, 3A-AC3 / 250VAC)
Relay electric life	100000 operations
Voltage SSR driving	8mA at 8VDC protected
	against short circuits
Auxiliary power supply Output	10VDC / 20mA max only
	for 12VAC/DC power supply
	intruments



Functional Data

Control	ON/OFF, Neutral Zone, PID single and double
Multi Set Points	Up to 4 programmable Set Points
Overall accuracy	±0.5% full scale, ±1%TC-S
Display resolution	According to the used probe 1/0,1/0,01/0,001
Input measurement range	According to the used probe and to the measurement unit
Max cold junction compensation drift	0.04 °C/°C with operating temperature 050 °C after warm-up time of 20min.
Sampling rate	8 samples per second
Display	4 red digits h=12 mm
Parameter access	Protected by password
Fast parameters programming	By using programming PDI-KEY
Operating temperature	0-50 °C
Operating humidity	30-95 RH% without condensation

Front Panel Description



Connections



Dimensions (mm)



Panel Cut Out and Mounting (mm)



General Data

Mechanical Charactistics	
Housing	Self-extinguishing plastic,
	UL94 V0
Connections	2,5mm ² screw terminal block
Mounting	Flush in panel
	cut out 29x71mm
Front panel protection	IP65 mounted in panel
	with gasket
Dimensions	W 75 x H 33 x D 64mm
Weight	110g
Storage temperature	-10°C to +60°C
Electrical Data	
Power Supply	12, 24VAC/VDC,
	100-240VAC +/-10%
AC Frequency	50 / 60Hz
Power consumption	4VA approx.
Installation category	II
Measurement category	
Electric shock protection class	Class II for Front panel
Insulation	Reinforced insulation
	between the low voltage
	section (supply 100-240VAC
	and relay outputs) and
	the front panel or between
	the low voltage section
	(supply 100-240VAC and
	relay outputs) and the extra
	low voltage section (inputs
	and SSR outputs);
	no insulation between
	12VAC/DC and input or
	between SSR outputs and
	input.

Specifications are subject to change without notice. Pictures are just an example. For special features and/or customization, please ask to our sales network.